

MODIFIED CLAIMS

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(28.01.04); original claims 1-10 replaced with modified
claims 1-10 (3 pages)]

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1. A biosensor, comprising:

- an electrically or electronically insulating support (2), comprising at least one useful face (20),
- a multiplicity of electrically or electronically
10 conducting electrodes (31, 32) that are placed on the
useful face (2a) of the support in any predetermined
operating arrangement, and are exposed in the sense
that said electrodes may be brought together into
contact with one and the same external medium, for
15 example liquid,
- a plurality of ligands each multiply attached to
respectively different electrodes (31, 32),
- a multiplicity of electrical terminals (4),
corresponding to said electrodes (31) respectively,
20 which are placed on a useful face (2a or 2b) of the
support (2) and are exposed in the sense that said
terminals may be electrically or electronically
connected to the outside independently of one another,
- a multiplicity of electrically or electronically
25 conducting tracks (5), each running along one (2a) of
the faces of the support (2) and/or the other (2b),
connecting the multiplicity of electrodes (31 and 32)
to the multiplicity of terminals (4) respectively, and
- a layer (6) of an electrically or electronically
30 insulating material coating one (2a) face of the
support (2) and/or the other (2b), on the one hand at
least partly covering said tracks (5) and on the other
hand exposing both the electrodes (31, 32) and the
terminals (5), characterized in that, in combination,
35 on the one hand the multiplicity of electrodes (4) is
placed in an extreme zone (1a) on the opposite side
from another extreme zone in which the electrical
terminals (5) are grouped together, and on the other

hand the support (2) includes at least one flexible zone (1c) located between the two extreme zones.

2. The biosensor as claimed in claim 1, characterized
5 in that the entire support is flexible.

3. The biosensor as claimed in claim 1, characterized
in that the flexible zone can bend about at least one
axis having a direction perpendicular to the direction
10 of alignment of the operating arrangement of the
electrodes (31, 32) and of the group of electrical
terminals (5).

4. The biosensor as claimed in claim 1, characterized
15 in that the support (2) is a flexible sheet made of
insulating material.

5. The biosensor as claimed in claim 1, characterized
in that each electrode has at least two adjacent ends
20 (31, 32) connected together.

6. The biosensor as claimed in claim 1, characterized
in that at least one other electrically or
electronically conducting track (7) runs along one (2a)
25 of the faces of the support and/or along the other
(2b), between another electrical terminal (8) placed on
a useful face (2b) of the support, which terminal is
exposed in order to be connected to a reference
potential, and an end (8a) covered with a layer (9) of
30 the electrically or electronically insulating material.

7. The biosensor as claimed in claim 6, characterized
in that said other conducting track (7) is assigned to
the shielding of the arrangement of the electrodes (31,
35 32).

8. The biosensor as claimed in claim 6, characterized
in that two other electrically or electronically

conducting tracks (7, 10) run between two other electrical terminals (8, 11) in order to be connected to a reference potential, these being placed on one face (2a) of the support (2) and the other (2b) respectively, and two respective ends (8a, 10a) that are each covered with the electrically or electronically insulating material.

9. The biosensor as claimed in claim 1, characterized in that at least one electrical terminal (4) is placed on the other face (2b) of the support, which is also a useful face, and the track (5) that corresponds to it passes through the thickness of the support (2).

10. The use of a sensor (1) comprising:

- an electrically or electronically insulating support (2), comprising at least one useful face (2a),
- a multiplicity of electrically or electronically conducting electrodes (31, 32) that are placed on the useful face (2a) of the support in any predetermined operating arrangement, and are exposed in the sense that said electrodes may be brought together into contact with one and the same external medium, for example liquid,

- a multiplicity of electrical terminals (4), corresponding to said electrodes (31) respectively, which are placed on a useful face (2a or 2b) of the support (2) and are exposed in the sense that said terminals may be electrically or electronically connected to the outside independently of one another,

- a multiplicity of electrically or electronically conducting tracks (5), each running along one (2a) of the faces of the support (2) and/or the other (2b), connecting the multiplicity of electrodes (31 and 32) to the multiplicity of terminals (4) respectively, and

- a layer (6) of an electrically or electronically insulating material, coating one (2a) face of the support (2) and/or the other (2b), on the one hand at

least partly covering said tracks (5) and on the other hand exposing both the electrodes (31, 32) and the terminals (5),
in order to obtain a biosensor.